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EXAMINER

NGUYEN, THU HA T

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/895,999

Applicant(s)

SULLIVAN ET AL.

Examiner

Thu Ha T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-17, 19-35 and 37-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17, 19-35 and 37-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 11-17, 19-35, and 37-44 are presented for examination.

**Response to Arguments**

2. Applicant's arguments filed August 23, 2006 have been fully considered but they are not persuasive because of the following reasons:

3. Applicant argues that Ramanathan does not teach or suggest executing a simulation of said network operations based on said hierarchical relationships between said components. In response to applicant's argument, the examiner submits that Ramanathan does teach the feature of executing a simulation of said network operations based on said hierarchical relationships between said components as shown in figures 8-9, col. 25, lines 26-col. 26, lines 39, col. 29, line 10-col. 30, line 65.

4. Applicant argues that Ramanathan and Grau do not teach or suggest performing management functions with respect to the nodes of the network wherein one of said network management functions is to initialize one or more of said system components and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components. In response to applicant's argument, the examiner submits that in the previous office action the examiner indicated that Ramanathan teaches using said information for one or more network management functions at said meta-server as shown in figures 8-9, col. 25, lines 26-col. 26, lines 39.

However, Ramanathan does not explicitly teach the feature of wherein one of said network management functions is to initialize one or more of said system

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components at said meta-server and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

Grau, in the related art, teaches wherein one of said network management functions is to initialize one or more of said system components at said meta-server and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components (col. 4, line 45-col. 5, line 8, col. 7, line 10-col. 8, line 39, col. 11, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Grau into Ramanathan system because it would provide an improved network mapping tool for efficiently managing complex internetwork computing systems (see Grau col. 1, lines 12-15).

5. Applicant argues that the combination of Ramanathan, Munguia and Grau does not teach or suggest to use said information for one or more network management functions, wherein one of said network management functions is to initialize one or more of said meta-server components at said meta-server and said defined hierarchical relationships between each of said meta-server components is used to determine an appropriate order in which to initialize said one or more meta-server components.

In response to applicant's argument, the examiner asserts that in the previous office action the examiner submitted that Ramanathan does not explicitly teach wherein one of said network management functions is to initialize one or more of said meta-server components at said meta-server and said defined hierarchical relationships

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between each of said meta-server components is used to determine an appropriate order in which to initialize said one or more meta-server components.

**Grau**, in the related art, teaches wherein one of said network management functions is to initialize one or more of said meta-server components at said meta-server and said defined hierarchical relationships between each of said meta-server components is used to determine an appropriate order in which to initialize said one or more meta-server components (col. 4, line 45-col. 5, line 8, col. 7, line 10-col. 8, line 39, col. 11, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Grau** into **Ramanathan** system because it would provide an improved network mapping tool for efficiently managing complex internetwork computing systems (see **Grau** col. 1, lines 12-15).

6. Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 11, 22, 29 and 40. Claims 12-17, 19-21, 23-28, 30-35, 37-39, and 41-44 are also rejected at least by virtue of their dependency on independent claims and by other reasons set forth in the previous office action dated April 20, 2006.

7. Applicants still have failed to identify specific claim limitations that would define a patentable distinction over cited prior arts. Accordingly, rejections for claims 11-17, 19-35, and 37-44 are rejected below.

### **Claim Objections**

8. Claims 11, 22, and 29-35, 37-39 are objected to because of the following informalities:

9. Claim 11 recited the limitation "said system components", there is lack of antecedent basis for this limitation in this claim. Appropriate correction is required.

10. Claim 22 recited the limitations "said hierarchical relationships" and "said meta-server components". There is lack of antecedent basis for these limitations in this claim. Appropriate correction is required.

11. Claim 29 recited the limitations "said plurality of components", "said system components" and "said one or more components". There is lack of antecedent basis for these limitations in this claim. Appropriate correction is required.

12. Since the applicant has amended independent claim 29 to overcome 353 U.S.C. 101 rejection in the currently response, the examiner suggests the applicant should change the dependent claims 29-35, and 37-39 to make them consistent with independent claim 29 such as "The physical article of manufacture as in claim 29....". Appropriate correction is required.

### **Claim Rejections - 35 USC § 112**

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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14. Claims 13, 22 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Claim 22 recited the limitations "said component", "said data center", said network management functions", "said system components" and "said one or more components". There is insufficient antecedent basis for this limitation in this claim. Appropriate correction is required.

16. Claim 29 recited limitations "said system components" and "said one or more components". There is insufficient antecedent basis for this limitation in this claim. Appropriate correction is required.

17. Likewise, appropriate correction for all dependent claims which are depended on independents claims 22 and 29 is required, if any.

### **Claim Rejections - 35 USC § 102**

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 37 1(c) of this title before the invention thereof by the applicant for patent.

19. Claims 40-44 are rejected under 35 U.S.C. §102(e) as being anticipated by **Ramanathan et al.**, (hereinafter Ramanathan) U.S. Patent No. **6,286,047**.

20. As to claim 40, **Ramanathan** teaches the invention as claimed, including a method comprising:

defining one or more logical hierarchical relationships between a plurality components on a network including one or more associations, dependencies and/or prerequisites, said logical hierarchical relationships providing information related to network operations (figures 2-4, 8-9, col. 6, lines 22-col. 7, lines 63, col. 9, lines 3-col. 10, lines 10, col. 13, lines 31-col. 14, lines 12, col. 25, lines 26-60); and

executing a simulation of said network operations based on said hierarchical relationships between said components (figures 8-9, col. 25, lines 26-col. 26, lines 39).

21. As to claim 41, **Ramanathan** teaches the invention as claimed, further comprising: storing different groups of said logical hierarchical relationships into one or more tool sets, said tool sets usable for conducting said simulation (figure 4, col. 10, lines 13-64).

22. As to claim 42, **Ramanathan** teaches the invention as claimed, further comprising: using results of said simulation to design additional logical hierarchical relationships between said components (col. 8, lines 52-col. 9, lines 11).

23. As to claim 43, **Ramanathan** teaches the invention as claimed, wherein designing additional logical hierarchical relationships comprises optimizing said logical hierarchical relationships between said components (col. 1, lines 41-65).



24. As to claim 44, **Ramanathan** teaches the invention as claimed, wherein said additional logical hierarchical relationships are designed responsive to an inclusion of new components on said network (col. 8, lines 52-col.9, lines 11).

### Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 11-17, 19-21 and 29-39 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Ramanathan** U.S. Patent No. **6,286,047**, in view of **Grau et al.** (hereinafter **Grau**) U.S. Patent No. **5,910,803**.

27. As to claim 11, **Ramanathan** teaches the invention as claimed, including a method comprising:

logically grouping a plurality of components at a data center into a single meta-server (figure 1, col. 3, lines 56-60, col. 6, lines 60-65);

defining one or more hierarchical relationships between each of said components including one or more associations, dependencies and/or prerequisites, said

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hierarchical relationships providing information related to network operations at said meta-server (figures 2-4, 8-9, col. 6, lines 22-col. 7, lines 63, col. 9, lines 3-col. 10, lines 10, col. 13, lines 31-col. 14, lines 12, col. 25, lines 26-60); and

using said information for one or more network management functions at said meta-server (figures 8-9, col. 25, lines 26-col. 26, lines 39).

However, **Ramanathan** does not explicitly teach the feature of wherein one of said network management functions is to initialize one or more of said system components at said meta-server and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

**Grau**, in the related art, teaches wherein one of said network management functions is to initialize one or more of said system components at said meta-server and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components (col. 4, line 45-col. 5, line 8, col. 7, line 10-col. 8, line 39, col. 11, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Grau** into **Ramanathan** system because it would provide an improved network mapping tool for efficiently managing complex internetwork computing systems (see **Grau** col. 1, lines 12-15).

28. As to claim 12, **Ramanathan** teaches the invention as claimed, wherein a first one of said defined hierarchical relationships comprise: a first zone or resource

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collection comprised of a first subset of said plurality of components (figure 5, item 70, col. 22, lines 25-36).

29. As to claim 13, **Ramanathan** teaches the invention as claimed, wherein a second one of said defined hierarchical relationships comprise: a second zone comprised of a second subset of said plurality of components (figure 5, items 72, 76, col. 22, lines 37-46).

30. As to claim 14, **Ramanathan** teaches the invention as claimed, wherein a third one of said defined hierarchical relationships comprise: an interconnect logically connecting said first zone and said second zone (figure 5).

31. As to claim 15, **Ramanathan** teaches the invention as claimed, wherein one of said components grouped within said first zone is a Web server (figure 1, item 12, figure 5, item 70, col. 6, lines 60-67).

32. As to claim 16, **Ramanathan** teaches the invention as claimed, wherein one of said components grouped in both said first zone and said second zone is a firewall (figure 5, item 72, col. 22, lines 37-46). A firewall is inherent in the mail server/web server system in order to authorize access to the appropriate mailbox/web services (i.e. back-end NFS, DNS) thereby allowing the E-mail/web services to be accessed by the subscriber (col. 22, lines 37-46).

33. As to claim 17, **Ramanathan** teaches the invention as claimed, wherein one of said components is a router (col. 1, lines 42-46).

34. As to claim 19, **Ramanathan** teaches the invention as claimed, wherein initializing comprises rebooting one or more of said system components (col. 16, lines 42-60).

35. As to claim 20, **Ramanathan** teaches the invention as claimed, wherein initializing comprises restarting one or more of said system components (col. 16, lines 42-60).

36. As to claim 21, **Ramanathan** teaches the invention as claimed, wherein initializing comprises reconfiguring one or more of said system components (col. 8, lines 52-col. 9, lines 11).

37. As to claim 29, **Ramanathan** teaches the invention as claimed, including a physical article of manufacture including program code which, when executed by a machine, cause said machine to perform the operations of:

logically grouping a plurality of components at a data center into a single meta-server (figure 1, col. 3, lines 56-60, col. 6, lines 60-65);

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defining one or more hierarchical relationships between each of said components, said hierarchical relationships providing information related to network operations at said data center (figures 2-4, 8-9, col. 6, lines 22-col. 7, lines 63, col. 9, lines 3-col. 10, lines 10, col. 13, lines 31-col. 14, lines 12, col. 25, lines 26-60); and

using said information for one or more network management functions at said data center (figures 8-9, col. 25, lines 26-col. 26, lines 39).

However, **Ramanathan** does not explicitly teach the feature of wherein one of said network management functions is to initialize one or more of said plurality of components at said data center and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

38. **Grau**, in the related art, teaches wherein one of said network management functions is to initialize one or more of said plurality of components at said data center and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components (col. 4, line 45-col. 5, line 8, col. 7, line 10-col. 8, line 39, col. 11, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Grau** into **Ramanathan** system because it would provide an improved network mapping tool for efficiently managing complex internetwork computing systems (see Grau col. 1, lines 12-15).

39. Claims 30-39 have similar limitations to claims 12-21; therefore, they are rejected under the same rationale.

40. Claims 22-28 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Ramanathan** U.S. Patent No. **6,286,047**, in view of **Munguia et al** (hereinafter Munguia) U.S. Patent Application Publication No. **US 2001/0052013**, and further in view of **Grau et al.** (hereinafter Grau) U.S. Patent No. **5,910,803**.

41. As to claim 22, **Ramanathan** teaches the invention as claimed, including a meta-server comprising:

a plurality of front end Web servers to process client requests for Web pages (figure 5, item 70, col. 2, lines 50-col. 3, lines 8, col. 22, line 25-46);

a controller (figure 8, items 108, 110)) to define one or more logical hierarchical relationships between each of said front end Web servers and back-end servers including one or more associations, dependencies and/or prerequisites, said hierarchical relationships providing information related to network operations at said meta-server and to use said information for one or more network management functions at said meta-server (figures 2-4, 8-9, col. 6, lines 22-col. 7, lines 63, col. 9, lines 3-col. 10, lines 10, col. 13, lines 31-col. 14, lines 12, col. 25, lines 26-60).

However, **Ramanathan** does not explicitly teach a plurality of back-end servers to perform various back-end processing functions associated with said client requests and wherein one of said network management functions is to initialize one or more of

said meta-server components at said meta-server and said defined hierarchical relationships between each of said meta-server components is used to determine an appropriate order in which to initialize said one or more meta-server components.

**Munguia** teaches a plurality of back-end servers to perform various back-end processing functions associated with said client requests figures 2, 5, paragraphs 0081-0082). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Ramanathan** to include a plurality of back-end servers because it would provide an efficient and security system that allow a client can communicate with specific back-end server.

**Grau**, in the related art, teaches wherein one of said network management functions is to initialize one or more of said meta-server components at said meta-server and said defined hierarchical relationships between each of said meta-server components is used to determine an appropriate order in which to initialize said one or more meta-server components (col. 4, line 45-col. 5, line 8, col. 7, line 10-col. 8, line 39, col. 11, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Grau** into **Ramanathan** system because it would provide an improved network mapping tool for efficiently managing complex internetwork computing systems (see Grau col. 1, lines 12-15).

42. As to claim 23, **Ramanathan** teaches the invention as claimed, further comprising: said controller further defining one or more additional logical hierarchical relationships between said firewall and said front-end and/or said back-end servers (col.

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8, lines 52-col. 9, lines 11). However, **Ramanathan and Grau** system does not explicitly teach a firewall communicatively coupled between said front-end Web servers and said back-end servers to analyze and filter data traffic directed towards said back end servers.

**Munguia** teaches a firewall communicatively coupled between said front-end Web servers and said back-end servers to analyze and filter data traffic directed towards said back end servers (figures 1, 2, 5, items 24, 25, 30, paragraph 0082).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Munguia** into **Ramanathan and Grau** system to have a firewall coupled between front-end servers and back-end servers because it would provide an efficient system that keep security and track data traffic between front-end and back-end servers.

43. As to claim 24; **Ramanathan** teaches the invention as claimed, further comprising: said controller further defining one or more additional logical hierarchical relationships between said router, said front-end servers, said back-end servers and/or said firewall (col. 8, lines 52-col. 9, lines 11).

However, **Ramanathan and Grau** system does not explicitly teach a router communicatively coupled between said front-end Web servers, said back-end servers and an external network, said router to process data traffic according to a network addressing protocol.



**Munguia** teaches a router communicatively coupled between said front-end Web servers, said back-end servers and an external network, said router to process data traffic according to a network addressing protocol (figure 5, items 49, 55, paragraphs 0008, 0063, 0067).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Munguia** into **Ramanathan and Grau** system to have a router coupled between front-end servers and back-end servers because it would provide an efficient system that routing data packet between front-end and back-end servers.

44. As to claim 25, **Munguia** teaches the invention as claimed, wherein said front-end servers and said back-end servers are physically configured within a single unitized platform (figure 1).

45. As to claim 26, **Munguia** teaches the invention as claimed, wherein said front-end servers and said back-end servers communicate over a dynamically configurable backplane bus (figure 1).

46. As to claim 27, **Munguia** teaches the invention as claimed, wherein said defined hierarchical relationships comprise a first zone including said front-end Web servers, a second zone including said back-end servers, and an interconnect logically coupling said first zone with said second zone (figures 2, 5).

47. As to claim 28, **Munguia** teaches the invention as claimed, wherein said defined hierarchical relationships comprise a first zone including said front-end Web servers, a second zone including said back-end servers, an interconnect logically coupling said first zone with said second zone, and an interconnect resource comprised of said firewall (figures 1, 2, 5, items 24, 25, 30, paragraph 0082). It would have been obvious to one skill in the art to have the same motivation as set forth in claim 23, *supra*.

#### **Conclusion**

48. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

49. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571)

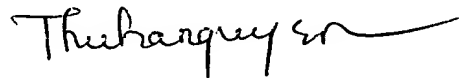
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272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ThuHa Nguyen

Primary Examiner

November 13, 2006